

Geologic Division Guidelines for CD Publications

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GLOSSARY

ARC Export 1 Software by Environmental Systems Research Institute, Inc. (ESRI), Redlands, Ca-

lif.

ASCII American Standard Code for Information Exchange; a pure ASCII file would be a

file that uses only ASCII characters.

CD Compact disc.

CD-ROM Compact disc–read-only memory.

CD-WO Compact disc—write once.

DDS Digital Data Series, a USGS formal publications series historically released on CD-

ROM.

Disc Optical medium such as a CD-ROM.

Disk Magnetic medium such as a hard disk or floppy disk (diskette).

DLG-3 Digital line graph of the U.S. Geological Survey; see references below:

U.S. Geological Survey, 1987, Digital line graphs from 1:2,000,000-

scale maps: U.S. Geological Survey Data Users Guide 3, 71 p.

U.S. Geological Survey, 1989, Digital line graphs from 1:100,000-scale maps: U.S. Geological Survey Data Users Guide 2, 88 p.

U.S. Geological Survey, 1990, Digital line graphs from 1:24,000-scale

maps: U.S. Geological Survey Data Users Guide 1, 107 p.

DOI U.S. Department of the Interior.

DOS A computer operating system.

(MS-DOS, PC-DOS)

DVD Originally an abbreviation for Digital Video Disk, this term now generally refers to

a variety of application types, such as digital movies, digital audio, and applications

equivalent to current CD-ROM applications, on DVD media.

DXF Drawing exchange file.

GPO Government Printing Office.

GSSEARCH Public-domain software developed by the USGS for bibliographic searches and

used on CD-ROM's for many kinds of searches; runs only in DOS.

HFS Hierarchical file system used by Apple Computer.

HTML HyperText Markup Language.

ISO International Standards Organization; ISO 9660 is a CD-ROM standard that makes

the content of a CD-ROM accessible to any computer platform conforming to this

standard.

Jewelcase Transparent hinged plastic box in which CD's are packaged; printed liners that are

visible through the box and shrinkwrap describe the publication.

OPS Office of Program Support in the USGS.

PDF Portable document file of Adobe.

PG Publications Group, Geologic Division, USGS.

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Premaster To create a disc that is used by a CD manufacturer to make the master for replica-

tion.

UNIX A computer operating system.

USGS U.S. Geological Survey, a bureau of the U.S. Department of the Interior.

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 $^{^{1}}$ Any use of trade, product, or firm names in this publication is for descriptive purposes only and does not imply endorsement by the U.S. Government.



I. INTRODUCTION

These guidelines define the procedures under which digital data are formally released for public distribution on compact discs (CD's) by the Geologic Division of the U.S. Geological Survey. All applicable procedures that currently exist for printed publications (including technical review and Director's approval) apply to information published on CD. CD-ROM (compact disc—read-only memory) is now an accepted medium for electronic publication, but in these guidelines we use the term "CD" so as not to restrict the scope to CD-ROMs. Many of the principles for designing a CD-ROM publication also apply to releases on other optical media, such as DVD.

HELP AVAILABLE FROM THE PUBLICATIONS GROUPS

The Geologic Division Publications Groups in Reston, Va., Denver, Colo., and Menlo Park, Calif., have Editors and CD-ROM Specialists available to help authors prepare CD publications. Consulting with these publications specialists in the planning stages will help authors to release data most economically and usefully.

Authors should not assume their discs to be in final form until they have obtained Director's approval, but a write-once disc should be provided to technical reviewers, the CD-ROM Specialists, and Editors so that all software, tutorials, and menus can be tested. The CD-ROM Specialists have the equipment and knowledge to help authors compile a write-once disc.

The Eastern Publications Group maintains the Government Printing Office contract for mass production of CD's. The Publications Groups can help authors determine how many copies need to be made. All production costs are charged to the authors' team or project.

TYPES OF COMPACT DISC PUBLICATIONS

The Geologic Division has published a variety of CD-ROM's in the Digital Data Series and as Open-File Reports. Most of these CD's have been traditional fielded data bases or collections of photographs. Some have been multimedia CD's. Their primary audience has been the geoscience community. Most users of these CD's have probably applied the information on them in furtherance of their own projects; the CD's have not usually been "end products" that stand entirely alone.

Digital Data Series (DDS)

This series is equivalent in scope to USGS printed series, such as bulletins, professional papers, and geologic quadrangle maps; the intent is a formal digital publication series. DDS CD's contain more than data: software and explanatory text are provided to enhance the usefulness of the data. In other words, a disc made to distribute only raw data should not be a DDS. Moreover, DDS CD's are intended to be self-contained. The user should not be required to go elsewhere for any program or anything else to make a DDS CD totally functional. As part of a formal series, such DDS CD's receive automatic distribution to Government Printing Office (GPO) depository libraries, are sold through GPO stores, and are announced and sold by the U.S. Geological Survey (USGS) through Information Services. Generally, these CD's are produced in substantial quantities through commercial mass-production molding technology; however, in-house CD-WO technology may develop into "disc-on-demand" distribution, depending upon the quantity desired.

Open-File Report

A second type of CD produced by the Geologic Division is that released to the public through the informal Open-File Report Series. Depending upon the intended audience and the mode of production, these CD's may receive automatic distribution to the Government Printing Office (GPO) depository libraries. These CD's may be produced through the commercial mass-production molding technology or the in-house CD-WO (compact disc-write-once) technology, depending upon the quantity desired.



CROSS- OR MULTI-PLATFORM ACCESSIBILITY

Authors are encouraged to make their publications as widely accessible and useful as possible—beyond the target audience. One of the great strengths (and successes) of CD-ROM has been its cross-platform accessibility provided by the physical format standards and the logical (data) standards of the International Standards Organization (ISSO 9660).

Data in a DOS binary-file format are not readily (if at all) accessible by Macintosh or UNIX users. Platform independence can be achieved by providing application programs for all three major platforms (DOS, Macintosh, UNIX) or at least by providing compilable software code. Likewise, inclusion of access software for both Macintosh and Windows versions is desirable. However, this breadth may not be practicable in some cases.

Authors may be able to meet users' needs by providing **common** multiple-platform formats such as Arc Export, DLG-3, DXF, ASCII, HTML, and PDF (these terms are defined in the glossary following the contents). Authors may also consider open-filing a CD of "raw" data.

LOGICAL STRUCTURE OF CD'S

All CD-ROM's produced by the USGS must conform to (1) the ISO 9660 standard, (2) the ISO 9660 standard and Apple Computer's Hierarchical File System (HFS) standard (the so-called hybrid disc), or (3) standards appropriate for CD's other than CD-ROM's. We do not recommend using other standards such as Hi-Sierra or Rockridge for publications unless such use is required by a critical software application.

The Publications Group CD-ROM Specialists are primarily responsible for the logical structure of USGS-produced CD's; this includes such matters as technical factors associated with the production of a CD. The authors are responsible for internal labeling and for layout and naming of subdirectories and files, subject to use of standard elements common to all CD's.

• In naming files, directories, and subdirectories, the ISO 9660 standard limits directory and subdirectory names to eight characters; it does not allow the use of the dot-three extension.. The only characters that can be used for naming directories and files are the alpha (A Z), upper-case only, and numeric (0 9) characters, and the underscore (_). All lower-case characters in file and directory names will be converted to upper-case by the premastering software. (HFS files maintain both upper- and lower-case letters.) Finally, there are two levels of implementation allowed by the ISO 9660 standard (creatively named Level 1 and Level 2).

Level 1 file names are limited to the DOS eight-dot-three convention.

Level 2 file names can be as long as 28 characters. However, when accessing the disc, the operating system limitations (if any) prevail (for example, DOS will truncate such names to eight dot three). We recommend that the Level 2 convention not be used for publications unless such use is required by a critical software application (for example, older versions of ArcInfo).

Level 3 file names can be as long as 32 characters. As with the Level 2 convention, when accessing the disc, the operating system limitations (if any) prevail (for example, DOS will truncate such names to eight dot three). We recommend that the Level 3 convention not be used for publications unless such use is required by a critical software application.

Joliet standard file names can be as long as 64 characters. As with the Level 2 convention, when accessing the disc, the operating system limitations (if any) prevail (for example, DOS will truncate such names to eight dot three). We recommend that the Joliet standard not be used for publications unless such use is required by a critical software application.

• The standard allows for a directory/subdirectory hierarchy of as many as eight levels.



• The optimal number of files in any given subdirectory is 40; certainly, degradation can be apparent if the number of these files exceeds 100. However, we have prepared discs having 400–600 files in a subdirectory, and we believe performance has been satisfactory.

REVISIONS OF PUBLISHED CD'S

Revisions of a CD to correct errors, refine software, reformat data, and even add small amounts of new data should be accommodated within a published CD that already has a series number. When the revised CD is produced, the date of revision should be clearly shown on the cover (see specifications for external components). In this case Information Services will no longer sell the original CD. These procedures are the same as those followed for hard-copy publications.

For Open-File Reports, if authors make minor revisions that do not merit releasing an entirely new CD to supersede the current one, they may replace Information Services and library CD's with revised ones. This is the reason for having the date of latest revision on the CD. Although point-of-sale data may be captured in the future, Information Services does not now keep a record of purchasers and therefore cannot notify them that revisions have been made.



II. DIGITAL DATA SERIES

The Digital Data Series (DDS) CD's are intended to be equivalent in scope to USGS printed series, such as bulletins, professional papers, and geologic investigations maps. Thus, DDS CD's are expected to contain more than data: software and explanatory text (which describes data collection techniques, analytical processes, and interpretation) are provided to enhance the value of the data. DDS CD's are intended to be self-contained: That is, the user should not be required to go elsewhere for any program or anything else to make a DDS CD totally functional. However, some users will want to export data for processing with their own analytical software, and these guidelines do not mean to imply that such analytical software would necessarily be included in the CD.

As part of a formal series, DDS CD's receive automatic distribution to the Government Printing Office (GPO) depository libraries, are sold through GPO stores, and are announced and sold by the U.S. Geological Survey (USGS) through Information Services. Generally, these CD's are produced in substantial quantities through the commercial mass-production molding technology; however, CD-WO technology may develop into "disc-on-demand" distribution, depending on the quantity desired. The Publications Groups can help the author determine how many copies need to be made. All production costs are charged to the author's team or project.

REVIEW AND APPROVAL RESPONSIBILITIES

Normal Division review and approval procedures apply to CD's produced in the Digital Data Series. In addition, software and data must meet standards described below.

Scientific Content

The responsibility for the scientific data content of CD publications (data sets, descriptive material, and so on) rests with the author or project manager and the Program Chief Scientist in accord with existing Division guidelines and procedures. The author is responsible for adequately testing the software against the data. The first author of a DDS must have a USGS affiliation.

All CD's distributed by the Geologic Division as DDS publications must clearly indicate authorship and responsibility. A sample citation follows:

Turner, R.M., and Bawiec, W.J., 1991, Geology of Nevada —A digital representation of the 1978 Geologic Map of Nevada, *with display software by R. A. Ambroziak: U.S. Geological Survey Digital Data Series DDS-2*, 1 CD-ROM.

Access Software

The access software and its functioning are the responsibility of the author or project manager with assistance from the Publications Group CD-ROM Specialist if needed. However, the CD-ROM Specialists have experience with access software that may be applicable to authors' needs.

Front-end menu systems provide quick and efficient access to files and will be useful on some CD's. Some tips for designing menus are provided in Appendix C. These tips may also apply to choices authors must make in designing any sort of graphical user interface (GUI).



As of 1996 the Publications Groups support a variety of access software and, when applicable, hold license agreements for some proprietary software as listed below:

Software	Applicable operating systems	Examples of published CD-ROM's	
Public Domain			
USGS GSMENU	DOS	DDS-18-A and -B.	
USGS GSSEARCH	DOS	DDS-18-A and -B.	
USGS GIV	DOS	DDS-2, -3, -9, -11, -15, -18-A.	
USGS BROWSE	DOS	DDS-9, -15.	
USGS SEE_TEXT	DOS	DDS-10, -27.	
USGS SEGMENT	DOS	DDS-5, -16.	
USGS SEGYDISK	DOS	DDS-5, -16.	
USGS SEA_ICE	MacOS, DOS, UNIX C-code	DDS-10, -27.	
Shareware			
CSHOW	DOS	DDS-35, -36.	
Commercial			
TextWare TEXTWARE LITE.	MacOS, DOS, UNIX	DDS-19.	
Adobe ACROBAT	MacOS, DOS, UNIX	OFR-96-96.	
ESRI ARCVIEW v.1	MacOS, DOS, UNIX	DDS-19.	
Aldus SUPERCARD	MacOS	DDS-17.	
Macromedia DIRECTOR*	MacOS, MS Windows	DDS-30*.	

*Rather than using the "Made with Macromedia" logo as required by the guidelines supplied with the Macromedia Director Run-Time Distribution Agreement, which is in violation of the USGS Manual, substitute the following phrase on the back-cover inlay and in a file on the disc:

"This report was created with Macromedia DirectorÆ multimedia authoring software. Macromedia and Director are trademarks of Macromedia, Inc."

If a CD contains proprietary software for which the Publications Groups do not have a license in place, the USGS author must obtain written authorization from the vendor that the software may be released and (or) used (with appropriate disclaimers or acknowledgments) by the USGS. It is not enough for the USGS author to have bought a site license, because such a license is not likely to cover the redistribution/publication of the software. The author and chief scientist are responsible for ensuring that software embedded on a CD or accompanying diskette can legally be distributed by the USGS. **Documentation to this effect should accompany the route sheet.** Images of license agreements or copyright releases must be on the CD (scanned as a TIFF image). Royalty-based software may be used with **prior** arrangement and approval—see your Publications Group before authoring the CD. Royalties per disc must be paid at the time of replication by the authors' team or project; royalty costs are added to the disc price and recovered by Information Services at the point of sale. **See Appendix B for detailed information about procedures for review and approval of license agreements.**

Editorial and Policy Review

All text files describing CD contents, installation procedures, interpretations, and references, as well as final artwork, must be reviewed by the appropriate Publications Group, approved for the Director, and corrected by the author as needed. Authors should submit a CD-WO with the package that is logged in to the Publications Groups for checking aspects of the CD that are best reviewed on-screen. Many editors presently find it more efficient to edit lengthy running text on paper than on-screen, but may be content with editing brief text files and lengthy lists or repetitive tabular material on-screen. Editors will determine what paper copy, if any, they need for review purposes on a case-by-case basis in consultation with the author.

Authors should not assume their discs to be in final form until they have obtained Director's approval.



Each CD must be accompanied by a note for the "Monthly List of New Publications of the USGS." This is abstracted from the README file and should outline the format of the data, the software used, and the hardware required to access the CD. (See Appendix D.)

PRODUCTION STANDARDS: EXTERNAL COMPONENTS

The Publications Group will prepare the reproducible copy for the CD label and liners from mill copy supplied by the author. It is not necessary for the author to format the label and liners in final form, but templates for such formatting are available from the Publications Group for those authors who want to use them to compose their copy.

The contract that the Eastern Publications Group administers for mastering and replicating CD's allows for the printing of four-color artwork. However, requesting more than one color on the jewelcase liner or two on the CD increases the cost of printing.

CD Label (samples are given in Appendix E)

The label printed on the top surface of the CD should contain the following:

- The phrase "U.S. GEOLOGICAL SURVEY" at the top and the phrase "DIGITAL DATA SERIES DDS–xxx," at the bottom, where xxx is the assigned DDS number.
- Title of CD.
- Department of the Interior (on the left) and USGS (on the right) seals equal in size. Other seals require justification and approval during the Director's approval process.
- Year of publication.
- The "Compact Disc Data Storage" registered logo (optional).
- Logos for ISO 9660 and (or) HFS as appropriate (optional).

Revised or updated CD's are identified in the series line: "DIGITAL DATA SERIES DDS-xxx, RELEASE x." Multiple discs in one jewelcase are also identified: "DIGITAL DATA SERIES DDS-xxx, DISC 1 OF 2," for example.

Jewelcase Liners

Every DDS CD produced by the USGS must include printed liners (inserts and inlays) placed inside the jewelcase and used to identify the CD and its contents. Various samples are given in Appendix G.

Front-Cover Insert.—The front-cover insert should show the title, byline, co-op note (if needed), Interior (left) and USGS (right) seals equal in size, series line (U.S. GEOLOGICAL SURVEY DIGITAL DATA SERIES DDS-xxx), year of publication, and other elements (graphics and (or) text) as desired. Revised or updated CD's are identified by the phrase "RELEASE X" on a line below the series line. Multiple discs in one jewelcase are identified by such a phrase as "DISCS 1 AND 2" on a line below the series line.

Supplemental material, such as an index map or a list of files on the CD, can be printed on the back of the front-cover insert (at an additional cost). CD's are packaged in shrink-wrap, so such material will not be visible to the purchaser until the wrap is torn off and the jewelcase opened.

Back-Cover Inlay and Spines.—The back-cover inlay has the title centered over two columns. The left column contains descriptive text excerpted from the note for the "Monthly List of New Publications of the USGS" and must be consistent with the note. The right column lists the system requirements (which also must be consistent with system requirements as described in the "Note" and in the digital files) followed by installation instructions. The bottom lines under both columns name the Interior Secretary and USGS Director and show the logos for ISO 9660 and (or) HFS (both optional) and Com-



pact Disc Data Storage. The Library of Congress Catalog number may be included as well, commonly at the bottom of the back cover.

The left or right column may include **approved** statements that software manufacturers require to acknowledge their products if a condition of use is that it be on the cover.

Two spines are attached to the sides of the back-cover inlay. They are identical except that one reads up and the other reads down. They consist of "A SHORTENED TITLE—USGS DDS-xxx."

Revised or updated CD's are also identified: "A SHORTENED TITLE—USGS DDS-xxx.

RELEASE x." Multiple discs in one jewelcase are also identified: "A SHORTENED TITLE—USGS DDS– xxx, DISCS 1 AND 2." (See Appendix F for examples.)

Bar codes for inventory control are also being included on the back-cover inlay of some CD's and will eventually be on all.

Insert Booklet (Optional)

Any CD may include a printed booklet placed inside the front cover of the jewelcase (at an additional cost). Such a booklet should describe the contents of the CD and may also contain installation information. The booklet cover must contain all the information normally on a front-cover insert. The CD author is responsible for writing any text that may be in the booklet. Publications Groups will prepare reproducible copy for printing. Booklets must have no more than 28 pages in order to fit in the jewelcase.

Software Distribution Diskette (Optional)

At the time of production, the CD itself should contain the latest version of any software intended for use with the CD. New or updated versions of the software can be released as the need arises. Typically, such updated software is distributed on a diskette. Increasingly, it may be desirable to release such software through a USGS Internet server, but this mode of release should be used only to augment release on diskette, never as a substitute for the diskette. An ASCII README file must accompany updated software.

PRODUCTION STANDARDS: INTERNAL COMPONENTS

In these guidelines we focus on the **minimum** requirements for structuring a CD (beyond the obvious requirements that the CD contain data and the software required to access or view the data). These guidelines are intended to allow flexibility beyond minimum requirements.

Volume Descriptor/Title File

Although this is a hidden file on the CD (from which the volume name is displayed when using the DOS DIR command), the following entries must be completed when premastering (other entries are optional):

Volume name/label: USGS_DDSxxx

CD creation date: month, day, and year the CD image was created

Volume set identifier: Digital Data Series

Publisher: USGS_GD_xPG (EPG, CPG, or WPG)

Data/CD preparer: Authors (of text, data, software created "in-house") and CD im-

age creator (use first initial and last name followed by a semicolon; for example, RTURNER; WBAWIEC; DTRAUDT)

CD Description (a pure-ASCII file named A_README.1ST, located in the root directory of the CD)



This file lets the user of the CD understand the purpose and contents of the CD, regardless of what operating system the CD is being used with. ASCII files can be read by using any commonly available operating system. However, different operating systems will require different implementations of any software or binary data included on the CD. Binary images (TIFF files) can be displayed on all platforms; search software might not be usable on all platforms.

- Title and Authors Section.—Equivalent to both front and back of a title page of any formal USGS printed book series. It should give the title of the CD, including all identification and cataloging information; authorship; co-op notes; Department and Agency affiliation; Secretary and Director designation; and ordering information.
- Overview Section.—Equivalent of a conventional abstract of the scientific content. Should include at least a basic description of the type and scope of information on the CD. May also be called "Executive Summary," if that would seem to suit the target audience.
- CD Contents and Organization Section.—Shows what files are on the CD, what they contain, and where they are (that is, directory or folder structure and list of what files are in each directory or folder). This section should, at a minimum, list and describe primary files, citing subdirectories where appropriate. In naming files, use names that are descriptive or that include an ASCII file explaining what the file names refer to. All file names should conform to the ISO 9660 standard.
- Disclaimer Section.—The following disclaimer is applicable to Geologic Division publications on CD:

This Compact Disc (CD) publication was prepared by an agency of the United States Government. Neither the United States Government nor any agency thereof nor any of their employees makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed in this report or represents that its use would not infringe privately owned rights. Reference therein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof.

Although all data and software published on this CD have been used by the USGS, no warranty, expressed or implied, is made by the USGS as to the accuracy of the data and related materials and (or) the functioning of the software. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the USGS in the use of these data, software, or related materials.

- Software Installation Section.—Detailed information about installing any software on the CD.
- The following sections should be either in the A_README.1ST file or in other files referenced in the A_README.ST file.
- Contacts Section.—Provides postal and e-mail addresses for the authors. Authors should consider giving a universal address as well, one that may be current longer than that of an individual.
- Acknowledgments Section.—Credits the sources of data, information, software, or other material contributions on the CD. This is the place to put **approved** statements that software manufacturers require to acknowledge their products (in addition to placing it on the cover, if that is also required).
- System Requirements Section.— List of the minimum hardware and software requirements to use the data on the CD. This information is repeated on the jewelcase liner (see "Production Standards: External Components").
- Technical Information Section.—In-depth technical information about the data on the CD.
- Troubleshooting Section.— Provides information on problems that users may encounter when running the CD and measures they can take to remedy them.
- References Section.—List of references cited in all parts of the CD. As with all formal Geological



Survey publications, CD's need a section wherein the references used are cited. These citations should be in standard USGS style.

On-Screen Documentation for any Software on the CD

Such documentation can consist of a context-sensitive help file system, a document that can be printed, both of these, or some other means of giving the user information on how to use any software and information provided either on or with the CD.

Tutorial

Authors can make their discs easier to use by including a tutorial, a step-by-step explanation of the use of access software provided either on or with the CD. The tutorial should be clear and thorough enough that once CD users have completed it, they should not need to contact the author on how to use the software and information on the CD (see Appendix C for some tips for designing tutorials). If we are truly focused on the needs of the user, no CD should go out the door without a tutorial.

Identification of Text Files

All text files should begin with the name of the file, the series designation, overall title of the CD, and byline on page 1 (see sample in Appendix G).

MASTERING AND REPLICATION

The Eastern Publications Group (EPG) maintains a term contract through the Government Printing Office (GPO) for producing a master and replicate CD's. Although not in place yet, long-range plans for distribution of USGS publications include replication of CD's on demand. As of 1996 CD-WO media cost about \$6–8 per disc for materials; mass-production mastering costs about \$1,000 and \$2 per replicate. These costs are exclusive of other costs for Publications Group services that authors would typically incur for a formal publication.

DISTRIBUTION

CD's in the Digital Data Series will be distributed or sold to the public through normal USGS distribution channels. These channels are managed by the National Mapping Division's Information Services. The Government Printing Office handles distribution to depository libraries.



III. OPEN-FILE REPORTS

Authors can release large databases through the Open-File Report (OFR) series on CD's. Such Open-File CD's may or may not be accompanied by a paper-copy report. Another purpose for distributing OFR CD's is the preliminary release of data and (or) software prior to formal publication through the Digital Data Series.

Generally, OFR CD's are produced in limited quantities through either the molded or CD-WO (write-once) technology, depending on the quantity of CD's needed. Depending upon the intended audience and mode of production, OFR CD's may receive automatic distribution to the Government Printing Office (GPO) depository libraries.

REVIEW AND APPROVAL RESPONSIBILITIES

Scientific Content

The responsibility for the scientific data content (data sets, descriptive material, and so on) rests with the author or project manager and the Program Chief Scientist in accord with existing Division guidelines and procedures. The author is responsible for adequately testing the software against the data.

Access Software

The access software and its functioning are the responsibility of the author or project manager with assistance from the Publications Group CD-ROM Specialist if needed. However, the CD-ROM Specialists have experience with access software that may be applicable to authors' needs.

As of 1996, the Publications Groups support a variety of access software and hold license agreements for some proprietary software as listed below:

Software	Applicable operating systems	Examples of published CD-ROM's	
Public Domain			
USGS GSMENU	DOS	DDS-18-A and -B.	
USGS GSSEARCH	DOS	DDS-18-A and -B.	
USGS GIV	DOS	DDS-2, -3, -9, -11, -15, -18-A.	
USGS BROWSE	DOS	DDS-9, -15.	
USGS SEE_TEXT	DOS	DDS-10, -27.	
USGS SEGMENT	DOS	DDS-5, -16.	
USGS SEGYDISK	DOS	DDS-5, -16.	
USGS SEA_ICE	MacOS, DOS, UNIX C-code	DDS-10, -27.	
Shareware			
CSHOW	DOS	DDS-35, -36.	
Commercial			
TextWare TEXTWARE LITE	MacOS, DOS, UNIX	DDS-19.	
Adobe ACROBAT	MacOS, DOS, UNIX	OFR-96-96.	
ESRI ARCVIEW v.1	MacOS, DOS, UNIX	DDS-19.	
Aldus SUPERCARD	MacOS	DDS-17.	
Macromedia DIRECTOR*	MacOS, MS Windows	DDS-30*.	

^{*}Rather than using the "Made with Macromedia" logo as required by the guidelines supplied with the Macromedia Director Run-Time Distribution Agreement, which is in violation of the USGS Manual, substitute the following phrase on the back-cover inlay and in a file on the disc:

[&]quot;This report was created with Macromedia DirectorÆ multimedia authoring software. Macromedia and Director are trademarks of Macromedia, Inc."



If a CD contains proprietary software for which the Publications Groups do not have a license in place, the USGS author must obtain written authorization from the vendor that the software may be released and (or) used (with appropriate disclaimers or acknowledgments) by the USGS. It is not enough for the USGS author to have bought a site license, because such a license is not likely to cover the redistribution/publication of the software. The author and chief scientist are responsible for ensuring that software embedded in a CD or accompanying diskette can legally be distributed by the USGS. **Documentation to this effect should accompany the route sheet**. Images of license agreements or copyright releases must be on the CD (scanned as a TIFF image). Royalty-based software may be used with **prior** arrangement and approval—see your Publications Group before authoring the CD. Royalties per disc must be paid at the time of replication by the authors' team or project; royalty costs are added to the disc price and recovered by Information Services at the point of sale. **See Appendix B for detailed information about procedures for review and approval of license agreements.**

Director's Approval

The OFR CD receives Director's approval from the regional Publications Group. Each CD must be accompanied by a note for the "Monthly List of New Publications of the USGS." This is abstracted from the README file and should outline the format of the data, the software used, and the hardware required to operate the CD. (See Appendix D.)

PRODUCTION STANDARDS: EXTERNAL COMPONENTS

The Publications Groups will prepare the reproducible copy for the OFR CD label and liners from mill copy supplied by the author, or the authors can use templates for formatting disc labels and liners to prepare these themselves.

For mass production, the contract that the Eastern Publications Group administers for mastering and replicating CD's allows for the printing of four-color artwork. However, requesting more than one color on the jewelcase liner or two on the CD increases the cost of printing.

CD Label (samples are given in Appendix E)

The label printed on the top surface of the CD should contain the following:

- The phrase "U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT xx–xxx," where xx– is the last two digits of the appropriate year and xxx is the assigned OFR number.
- Title of CD.
- Department of the Interior (on the left) and USGS (on the right) seals equal in size. Other seals require justification and approval during the Director's approval process.
- Year of publication.
- The "Compact Disc Data Storage" registered logo (optional).
- Logos for ISO 9660 and (or) HFS as appropriate (or the words "ISO 9660" or "ISO 9660/HFS" as appropriate) (optional).

Jewelcase Liners

Every OFR CD must include a printed liner (back-cover inlay and spine) placed inside the jewelcase and used to identify the CD and its contents; at the author's discretion a front-cover insert may also be used (additional cost).

Front-Cover Insert (optional).—The front-cover insert (if used) should show the title, byline, coop note (if needed), Interior (left) and USGS (right) seals equal in size, series line (U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT xx–xxx), year of publication, and other elements (graphics and (or) text) as desired. Supplemental material can be printed on the back of the front-cover insert (additional cost). Mass-produced CD's are pack-



aged in shrinkwrap, so such material will not be visible to the purchaser until the wrap is torn off and the jewelcase opened.

Back-Cover Inlay and Spines.—The back-cover inlay has the title centered over two columns. The left column contains descriptive text excerpted from the note for the "Monthly List of New Publications of the USGS" and must be consistent with the "Note." The right column lists the system requirements (which also must be consistent with system requirements as described in the "Note" and in the digital files) followed by installation instructions. The bottom lines under both columns name the Interior Secretary and USGS Director, show the logos for ISO 9660 and (or) HFS (both optional) and Compact Disc Data Storage, and name the series (U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT xx–xxx).

The left or right column may include **approved** statements that software manufacturers require to acknowledge their products if a condition of use is that it be on the cover.

Two spines are attached to the sides of the back-cover inlay. They are identical except that one reads up and the other reads down. They consist of "A SHORTENED TITLE—USGS OFR xx- xxx." Revised or updated CD's are also identified: "A SHORTENED TITLE—USGS DDS- xxx, RELEASE x." Multiple discs in one jewelcase are also identified: "A SHORTENED TITLE—USGS DDS- xxx, DISCS 1 AND 2." (See Appendix F for examples.)

Insert Booklet (Optional)

Any CD produced by the USGS may include a printed booklet placed inside the front cover of the jewelcase (at an additional cost). Such a booklet should describe the contents of the CD and may also contain installation information. The booklet cover must contain all the information normally on a front-cover insert. The CD author is responsible for writing any text that may be in the booklet. Booklets must have no more than 28 pages in order to fit in the jewelcase.

Software Distribution Diskette (Optional)

At the time of production, the CD itself should contain the latest version of any software intended for use with the CD. However, the author may decide to distribute software separately or, as the need arises, may release new or updated versions of the software. Typically, such updated software is distributed on a diskette. Increasingly, it may be desirable to release such software through a USGS Internet server, but this mode of release should be used only to augment release on diskette, never as a substitute for the diskette. An ASCII README file must accompany updated software.

PRODUCTION STANDARDS: INTERNAL COMPONENTS

Volume Descriptor/Title File

Although this is a hidden file on the CD (from which the volume name is displayed when using the DOS DIR command), the following entries must be completed when premastering (other entries are optional):

Volume name/label: OFR93_xxxx

(where xxxx is the assigned OFR number)

or

SWDR92 (where an acronym or abbreviation of as many as 11

characters is preferred)

Although ISO 9660 provides for the use of as many as 32 char-

acters, DOS recognizes only the first 11 characters.

Volume set identifier: Open-File Report

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Publisher: USGS_GD_xPG (EPG, CPG, or WPG)

Data/CD preparer: Authors (of text, data, software created "in-house") and CD im-

age creator (use first initial and last name followed by a semico-

lon; for example, RTURNER; WBAWIEC; DTRAUDT)

CD Description (a pure-ASCII file named A_README.1ST, located in the root directory of the CD)

This file lets the user of the CD understand the purpose and contents of the CD, regardless of what operating system the CD is being used with. ASCII files can be read by using any commonly available operating system. However, different operating systems will require different implementations of any software or binary data included on the CD. Binary images (TIFF files) can be seen on all platforms; search software might not be usable on all platforms.

Title and Authors Section.—Official title of the CD, including all identification and cataloging information, authorship, and any co-op notes.

- Overview Section.—Equivalent of a conventional abstract of the scientific content. Should include at least a basic description of the type and scope of information on the CD. May also be called "Executive Summary," if that suits the target audience.
- CD Contents and Organization Section.—Shows what files are on the CD, what they contain, and where they are (that is, directory or folder structure and list of what files are in each directory or folder). This section should, at a minimum, list and describe primary files, citing subdirectories where appropriate. In naming files, use names that are descriptive or that include an ASCII file explaining what the file names refer to. All file names should conform to the ISO 9660 standard.
- Disclaimer Section.—The following disclaimer is applicable to Geologic Division publications on CD:

This Compact Disc (CD) publication was prepared by an agency of the United States Government. Neither the United States Government nor any agency thereof nor any of their employees makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed in this report or represents that its use would not infringe privately owned rights. Reference therein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof.

Although all data and software published on this CD have been used by the USGS, no warranty, expressed or implied, is made by the USGS as to the accuracy of the data and related materials and (or) the functioning of the software. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the USGS in the use of these data, software, or related materials.

- Acknowledgments Section.—Credits the sources of data, information, software, or other material contributions on the CD. This is the place to put **approved** statements that software manufacturers require to acknowledge their products (in addition to placing it on the cover, if that is also required).
- System Requirements Section.— List of minimum hardware and software requirements to use the data on the CD. This information is repeated on the jewelcase liner (see "Production Standards: External Components").

Software Installation Section.—Detailed information about installing any software on the CD.

MASTERING AND REPLICATION

The Eastern Publications Group (EPG) maintains a term contract through the Government Printing Office (GPO) for producing a master and replicating CD's for projects requiring mass-production. The Publications Groups also have the necessary CD-WO equipment to accommodate **limited** "on demand" CD rep-

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lication (as of 1996 CD-WO media cost about \$6–8 per disc for materials; mass-production mastering costs about \$1,000 and \$2 per replicate). These costs are exclusive of other costs for Publications Group services that authors might typically incur for an informal publication.

DISTRIBUTION

For OFR CD's accompanying or accompanied by paper-copy items, the author should supply the reproducible copy for Information Services and the depository copies as for any OFR. The author should also supply copies for each of the three regional USGS libraries and for any other depository libraries listed in the OF release. As for any OFR, the Publications Groups will send the final copies and appropriate transmittal memorandum to Information Services and to the various depositories. Information Services will distribute the OFR CD's and any paper copy that accompanies the CD. The author is responsible for providing Information Services with copies for distribution. Information Services will require additional copies as sales warrant. Ordering information should be given in the note for the "Monthly List" and in any paper copy that accompanies the CD.

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Appendix A

STEPS FOR PRODUCING A DDS PUBLICATION

- Author or project manager discusses project with appropriate colleagues and obtains any necessary approvals. First author must have USGS affiliation.
- 2. Author discusses project with production team in local Publications Group. Such a team generally consists of the Publications Group CD-ROM Specialist, a Text or Map Editor, and perhaps a Graphics Specialist. Points for discussion include the following:
 - Data type and format and size of database.
 - Software.
 - CD's internal organization.
 - Resources required.
 - Target audience. Identify the lowest common denominator in terms of computer platforms and skills and design accordingly.
 - Timeframe for publication and tentative schedule.
 - Graphics work.
- 3. Publications Group will document discussions with the author and estimated costs for the DDS in a Working Capital Fund Publication Plan signed by the Publications Group Chief.
- 4. Author obtains authorization of the appropriate Chief Scientist for expending funds for the publication as outlined in the Working Capital Fund Publication Plan.
- 5. Author obtains review, modification (if necessary), and approval of any license agreements to use and (or) distribute proprietary software.
- 6. Author prepares text and any cover art2 that is to be drafted in the Publications Group.
- 7. Author sends data, software, and digital text files to the Publications Group CD-ROM Specialist to be organized into agreed-upon CD structure (some authors have the resources to do this themselves and may wish merely to consult with the Publications Group CD-ROM Specialist at this point).
- 8. Author obtains technical review and Chief Scientist approval before submitting report to the Publications Group. Authors who make their own CD-WO should make a new one for Publications Group Editors that incorporates changes in response to technical review.
- 9. Author submits a route sheet, review copies, and mill copy (including a CD-WO) to the Publications Group. Authors should provide the following items:
 - Note for the "Monthly List of New Publications of the U.S. Geological Survey."
 - Text for the CD label.
 - Text for the jewelcase liners (front, back, and spine).
 - Supplemental text or illustration to be printed on the back of the front cover (optional).
 - Text and illustrations for insert booklet (optional).
 - Hard copy of all lengthy text files, double-spaced copy preferred (the editor may not need or want copy of all pages of lists or long and repetitive tabular material—requirements for hard copy should be addressed in the publication-planning meeting).



- 10. The editor will coordinate editing and review with the Publications Group CD-ROM Specialist, who also may need to see the mill copy at this time.
- 11. After edit, author makes corrections to text files and cover material, and gives the Editor a hard copy showing changes.
- 12. Editor obtains Director's approval from the Publications Group Chief.
- 13. Editor obtains a DDS number and gives it to the author.
- Author revises and tests the CD, consulting with the Publications Group CD-ROM Specialist and Editor as needed.
- 15. Author gives the final CD-WO and information on edition size and distribution to the Editor, who passes it along to the Publications Group Printing Specialist to forward to the contractor for mastering and replication.
- 16. Contractor masters and replicates CD and makes a proof of the jewelcase liner (if requested by the Printing Specialist) and sends a sample CD and the proof to the Publications Group.
- 17. The Publications Group Editor, CD-ROM Specialist, and the author evaluate the test CD, and the Editor checks any proof of the jewelcase liner.
- 18. The Publications Group gives the contractor approval to deliver the CD's.
- 19. The contractor ships the finished CD's in lots requested in the print order .

²Authors can request drafting of art that will be on a DDS CD, but any PG drafting will increase the charge to the author's team or project.



Appendix B

PROCEDURES FOR REVIEW AND APPROVAL OF LICENSE AGREEMENTS FOR USE AND DISTRIBUTION OF PROPRIETARY SOFTWARE

Two sections of the USGS Manual are relevant to use of proprietary software. Pertinent points from these sections are summarized here:

- 450.3 Use of Copyrighted Material in Publications
 - The author is responsible for securing permission of the owner for use of any copyrighted material.
 - Permission may be requested directly from the copyright owner, and a letter granting permission over a copyright owner's signature is sufficient.
 - Acknowledgment of use of copyrighted material should be contained in any release.
 The acknowledgment should be just that and avoid the appearance of advertising the copyrighted material.
 - The author's office [program or project] is responsible for paying any fees for use of copyrighted material.
- 500.24 Policy for Release of Computer Databases and Computer Programs
 - Commercially procured software programs incorporated into software programs developed by the USGS may not be duplicated, sold, or released to the public without special licensing or other written authorization from the copyright owner.
 - Proprietary software may not be provided with databases unless the USGS has paid
 the appropriate licensing fees and obtained written authorization from the owner that
 the software may be released and (or) used by the USGS.
 - A notation of the nonendorsement of commercial products should be included as appropriate, and the following disclaimer as stated in the Survey Manual should be included:

Although this program has been used by the USGS, no warranty, expressed or implied, is made by the USGS or the United States Government as to the accuracy and functioning of the program material nor shall the fact of distribution constitute any such warranty, and no responsibility is assumed by the USGS in connection therewith.

NOTE: The disclaimer on pages 11 and 16 of these guidelines is an expansion of the disclaimer quoted above and may be used in place of it. Some owners [vendors] may require the execution of a license agreement as a condition of the use of their proprietary software. **The author shall obtain legal review by the Solicitor's office on all license agreements to determine the acceptability of the terms and conditions and to ensure that there is no potential liability to the USGS.** (The requirement to display a vendor's logo on cover art or within a digital publication in order to use or distribute software is one example of a condition that may subject the USGS to liability if it is construed as advertising.) Such agreements must be reviewed on a case-by-case basis. To obtain legal review, the author should forward the license agreement to a contracting officer in the USGS Office of Program Support (OPS); OPS will request a review from the DOI Office of the Solicitor. License agreements that are acceptable, or that are modified to be acceptable, may then be executed by the author. Authors should consult with Publications Groups about requirements for review of license agreements.



A FEW SUGGESTIONS FOR DESIGNING CD PUBLICATIONS

First, remember that your goal in designing access software and tutorials is to ensure that anyone who is even slightly computer literate can use your CD-ROM without asking for help. By doing so, you will guarantee that such components as menus, tutorials, and other documentation are clear and easy to use.

Two excellent references to help you design your CD-ROM publication are "Designing and Writing Online Documentation," by William Horton (John Wiley and Sons, 1990; a second edition was published in 1994) and "Designing the User Interface—Strategies for Effective Human-Computer Interaction," by Ben Schneiderman (Addison-Wesley, 1992). Their bibliographies may lead you to other sources of advice.

The following tips for designing menus and navigational tools are adapted in part from Horton (1990) and Schneiderman (1992):

- Establish a sequence of menu items according to a natural order (such as time), alphabetic order, grouping of related items, or an arrangement in which the most frequently used or most important items come first.
- Write menus that make sense in any order users are likely to access them.
- Require no more than three to five buttons, commands, or menu selections to view information. Each of these three to five choices should contain no more than three to five words.
- Use parallel words and phrases in menu items and maintain a consistent typographic style. Fonts that look good on paper do not necessarily look good on a computer monitor.
- As in any writing, avoid needless words in menus.
- Put the key word in the menu item on the left.
- Make sure users know what to expect when they select a menu item.
- Use exactly the same wording in higher level menu items as in lower level menu items.
- Provide commands for backtracking and make it clear how to access those commands.
- Make the first heading in a text file or key words in a caption of a graphic consistent with the wording of the heading or menu selection that leads to it.
- Limit the number and complexity of navigational directions that users must remember by putting critical prompts and buttons on each screen.

In writing tutorials or other forms of instructions for using software, keep in mind the following points:

- Use the active voice and address the user in the second person (in the imperative: "click on the pull-down menu") rather than the third person ("the user should click on the pull-down menu"). This style of writing directions is clearer and easier to maintain throughout a document.
- Be consistent in how you refer to operations (such as pressing the escape key), menu choices, names of files, commands, error messages, and so on. Use common conventions. Use simple typography (such as < > for this and bold type for that) and stick to it!
- Be consistent in the level of detail you use in explaining your software. For instance, if you give such basic instructions as how to move the selection highlighting bar up and down, make other instructions equally explicit or assume a uniformly higher level of expertise overall.
- Tell the user if there is an optimal order in which to access certain features. For example, in accessing a geographic database, it may be preferable to plot certain features before others. If so, tell the user about the preferred order.



Appendix D

SAMPLE NOTE FOR THE "MONTHLY LIST OF NEW PUBLICATIONS OF THE

U.S. GEOLOGICAL SURVEY"

The following example of a note for the "Monthly List" is for a one-disc publication that has one author. Examples of notes for multi-author, multi-disc publications may be found in back issues of the "Monthly List" in listings for the Digital Data Series.

DDS-31. Profiles of gamma-ray and magnetic data for aerial surveys over parts of the Western United States from longitude 108 to 126 degrees W. and from latitude 34 to 49 degrees N., by J.S. Duval. 1995. One CD-ROM. \$32.

This CD-ROM was produced in accordance with the ISO 9660 standard; however, it is intended for use only on DOS-based computer systems. The minimum system requirements to use the data with the software provided on this disc are as follows: (1) IBM or compatible personal computer, (2) 386 or higher processsor, (3) 640K RAM (510K available), (4) MS- or PC-DOS version 5.0 or later, (5) SVGA graphics card (640 (col) by 480 (row) by 256 colors), (6) VESA video driver, (7) SVGA color monitor, (8) Microsoft MSCDEX version 2.1 or later, (9) CD-ROM drive with ISO 9660 software driver, (10) hard disk drive, and (11) Microsoft-compatible mouse.

This CD-ROM contains images generated from geophysical data, software for displaying and analyzing the images, and software for displaying and examining profile data from aerial surveys flown as part of the National Uranium Resource Evaluation (NURE) Program of the U.S. Department of Energy. The images included are of gamma-ray data (uranium, thorium, and potassium channels), Bouguer gravity data, isostatic residual gravity data, aeromagnetic anomalies, topography, and topography with bathymetry. This publication contains image data for the conterminous United States and profile data for the conterminous United States within the area longitude 108 to 126 degrees W. and latitude 34 to 49 degrees N. The profile data include apparent surface concentrations of potassium, uranium, and thorium, the residual magnetic field, and the height above the ground. The images on this CD-ROM include graytone and color images of each data set, color shaded-relief images of the the potential-field and topographic data, and color composite images of the gamma-ray data. The image display and analysis software can register images with geographic and geologic overlays. The profile display software permits the user to view the profiles as well as obtain data listings and export ASCII versions of data for selected flight lines.

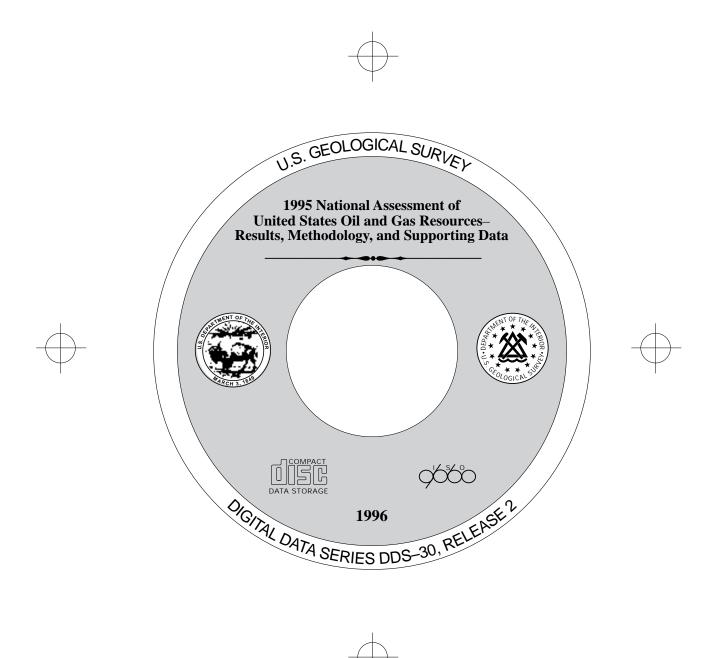


SAMPLE CD LABELS



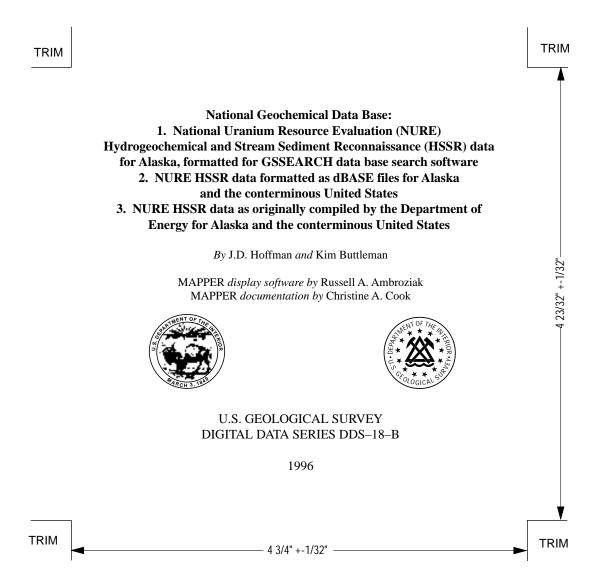
LABEL FOR CHAPTER B OF A SERIES



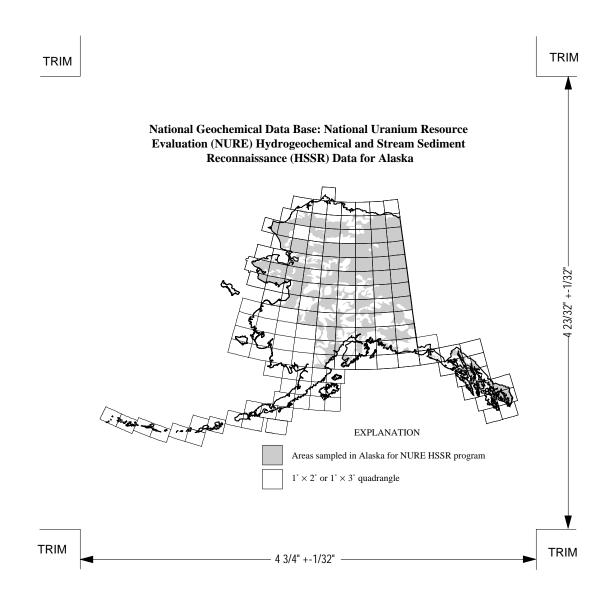




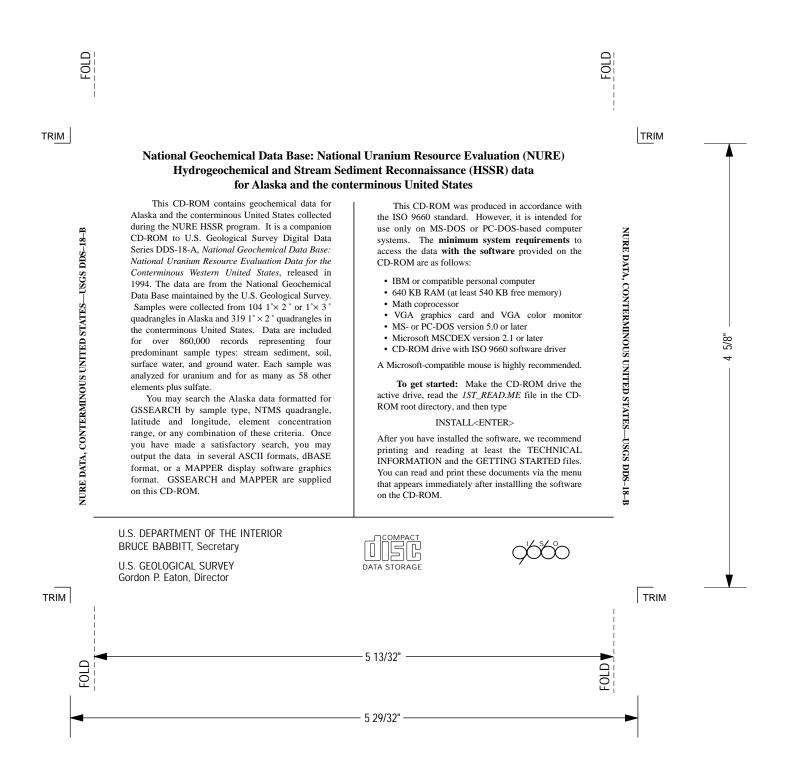
SAMPLE JEWELCASE LINERS



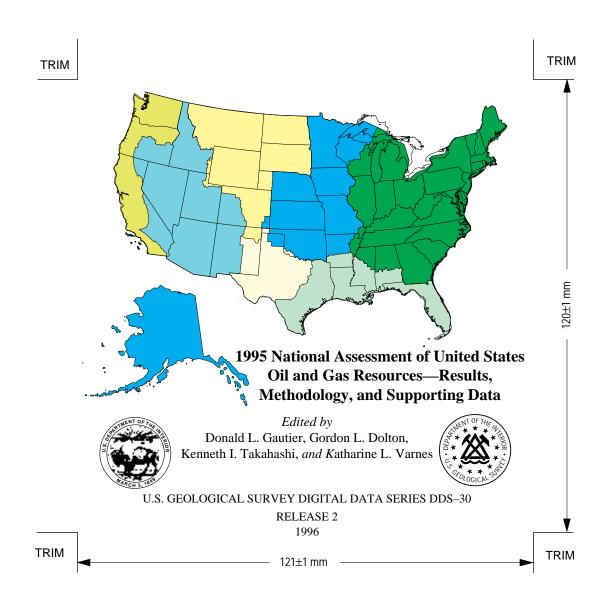




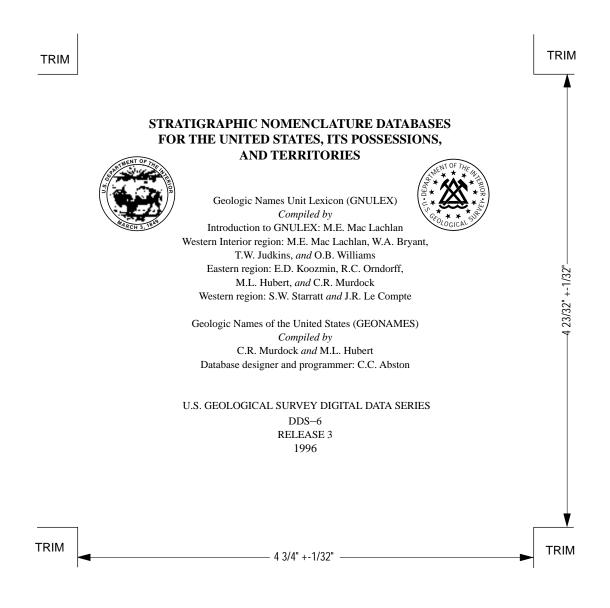














SAMPLE PAGE 1 OF A TEXT FILE IN A DDS, SHOWING NAME OF FILE, SE-RIES DESIGNATION, TITLE OF DDS, AND BYLINE

File name=DISCLAIM.DOC

U.S. GEOLOGICAL SURVEY DIGITAL DATA SERIES DDS-31

Profiles of Gamma-Ray and Magnetic Data for Aerial Surveys Over Parts of the Western United States from Longitude 108 to 126 Degrees W. and from Latitude 34 to 49 Degrees N.

by

Joseph S. Duval

DISCLAIMER

This Compact Disc (CD) publication was prepared by an agency of the United States Government. Neither the United States Government nor any agency thereof nor any of their employees makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed in this report or represents that its use would not infringe privately owned rights. Reference therein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof.

Although all data and software published on this CD have been used by the USGS, no warranty, expressed or implied, is made by the USGS as to the accuracy of the data and related materials and (or) the functioning of the software. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the USGS in the use of these data, software, or related materials.

NURE Flight-line CD-ROM

SUPPLEMENT TO "GUIDELINES FOR THE PREPARATION OF GEOLOGIC